

What is claimed is:

1. An SAW element comprising:
 - a serial arm formed between input and output terminals;
 - two serial arm side SAW resonators each of which has a predetermined resonant frequency and which are located in said serial arm with said serial arm being positioned between the two serial arm side SAW resonators;
 - at least three parallel arms formed between said serial arm and a reference potential terminal; and
 - parallel arm side SAW resonators each of which has an anti-resonant frequency corresponding with said predetermined resonant frequency of said serial arm side SAW resonator, at least one of said parallel arm side SAW resonators having a resonant frequency different from that of the other parallel arm side SAW resonators.
2. An SAW element as claimed in claim 1, wherein an inductance element is located between said reference potential terminal and a connection point connecting the reference potential terminal sides of said parallel arm side SAW resonators, respectively, with each other.
3. An SAW device including said SAW element claimed in claim 1 or 2, said SAW element being mounted on said SAW device.
4. An SAW device as claimed in claim 3, wherein said SAW device is a branching filter in which two SAW elements are mounted, said two SAW elements having center frequencies different from each other.
5. An SAW device in which an SAW element is mounted, said SAW element including an RADA-type circuit which has a serial arm formed between input and output terminals and which has a plurality of parallel arms formed between said serial arm and a reference potential terminal, said SAW

device comprising:

- a plurality of first SAW resonators which are located in said serial arm and each of which has a predetermined resonant frequency;

- second SAW resonators which are located in said a plurality of parallel arms, respectively and each of which has an anti- resonant frequency corresponding with said predetermined resonant frequency of said each first SAW resonator; and

- capacitance means which have a predetermined electrostatic capacity and which are located between said parallel arm positioned in the nearest position of said input terminal and said parallel arm positioned in the nearest position of said output terminal.

6. An SAW device as claimed in claim 5, wherein said capacitance means are formed in said SAW element.

7. An SAW device as claimed in claim 6, wherein said SAW device is a branching filter in which two SAW elements are mounted, said two SAW elements having center frequencies different from each other.

8. An SAW element comprising:

- a first wiring portion formed between input and output terminals;

- a plurality of second wiring portions formed between said first wiring portion and a reference potential terminal;

- at least two single unit elements;

- each of said single unit elements including:

- a first SAW resonator which is located in said first wiring portion and which has a predetermined resonant frequency and a predetermined anti-resonant frequency;

- a second SAW resonator which is connected to said second wiring portion of the side of said input terminal of said first SAW resonator and which has an anti-resonant

frequency corresponding with said predetermined resonant frequency of said first SAW resonator;

a third SAW resonator which is connected to said second wiring portion of the side of said output terminal of said first SAW resonator and which has an anti-resonant frequency corresponding with said predetermined resonant frequency of said first SAW resonator;

a first connection point for connecting said second SAW resonator of the side of said reference potential terminal and said third SAW resonator of the side of said reference potential terminal with each other; and

a first inductance element which is located between said first connection point and said reference potential terminal.

9. An SAW element as claimed in claim 8, wherein respective said predetermined resonant frequency of each of said single unit elements are corresponding with each other.

10. An SAW element as claimed in claim 8, wherein said SAW element further comprises a fourth SAW resonator, said fourth SAW resonator being located in at least any one of the positions between said first SAW resonators adjacent to each other, between said input terminal and said first SAW resonator, and between said output terminal and said first SAW resonator.

11. An SAW element as claimed in claim 8, wherein said SAW element further comprises a capacitance element, said capacitance element being located in at least any one of the positions between said first SAW resonators adjacent to each other, between said input terminal and said first SAW resonator, and between said output terminal and said first SAW resonator.

12. An SAW element as claimed in claim 8, wherein said SAW element further comprises a second connection point

for connecting the side of said reference potential terminal of said first inductance element in a respective single unit element to each other, and a second inductance element which is located between said second connection point and said reference potential terminal.

13. An SAW device including said SAW element claimed in any one of the claims 8 through 12, said SAW element being mounted on said SAW device.

14. An SAW device including two said SAW elements which are mounted on said SAW device and which have center frequencies different from each other, wherein at least one of the two SAW elements is a branching filter composed of the SAW element as claimed in any one of the claims 8 through 12.

15. An SAW device comprising:

- a mounting substrate on which a predetermined conductor pattern is formed;

- a first SAW element which is mounted on said mounting substrate by a flip-chip mounting, said first SAW element having a piezo-electric substrate and an SAW resonator formed on said piezo-electric substrate, said first SAW element further having input and output terminals which are formed in one of the both sides of a central axis of said piezo-electric substrate and which are electrically connected to said SAW resonator; and

- a second SAW element which is mounted on said mounting substrate adjacent to said first SAW element by a flip-chip mounting, said second SAW element having a piezo-electric substrate and an SAW resonator formed on said piezo-electric substrate, said second SAW element further having input and output terminals which are formed in the side remote from said first SAW element and which are electrically connected to said SAW resonator, said input and output terminals being formed in the side remoter from said first SAW element than from said central

axis of said piezo-electric substrate.

16. An SAW device as claimed in claim 15, wherein said input and output terminals of said first SAW element as well as said input and output terminals of said second SAW element are formed on a side surface at the side parallel to said central axis of said piezo-electric substrate.

17. An SAW device as claimed in claim 15, wherein said input and output terminals of said first SAW element, and said input and output terminals of said second SAW element are formed on corner portions of said piezo-electric substrates, respectively, said corner portions being different from each other.

18. An SAW device as claimed in claim 15, wherein said first SAW element and said second SAW element are formed in a body or separately from each other.

19. An SAW device as claimed in claim 15, wherein said SAW device has one or a plurality of said first SAW elements and said second SAW elements, respectively.

20. An SAW device as claimed in claim 15, wherein said first SAW element and said second SAW element have center frequencies different from each other, said first SAW element being a reception filter while said second SAW element being a transmission filter.

21. An SAW element comprising:

a piezo-electric substrate;

a pair of exciting electrode portions each of which has a shape of the teeth of a comb with being involved in each other and having a first film thickness and which are formed on said piezo-electric substrate, said pair of exciting electrode portions being made of at least aluminum or aluminum alloy, said pair of exciting electrode portions producing a surface acoustic wave (SAW)

on said piezo-electric substrate while the surface acoustic wave (SAW) thereby being converted into an electric signal;

a terminal electrode portion from which an electric signal is inputted or outputted; and

a wiring portion at least a part of which has a second film thickness larger than said first film thickness and which is formed on said piezo-electric substrate, said wiring portion being made of at least aluminum or aluminum alloy and electrically connecting said exciting electrode portion with said terminal electrode portion or said exciting electrode portions with each other.

22. An SAW element as claimed in claim 21, wherein said second film thickness is not larger than $2\mu\text{m}$.

23. An SAW element as claimed in claim 21, wherein said second film thickness is not larger than $1\mu\text{m}$.

24. An SAW device including said SAW element claimed in claim 21, said SAW element being mounted on said SAW device.

25. An SAW device as claimed in claim 24, wherein said SAW device is a branching filter in which said two SAW elements are mounted, said two SAW elements having center frequencies different from each other.